



IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A method for reducing solids buildup on an internal surface of ductwork between a reactor and subsequent product separation and recovery apparatus for conveying, at a first temperature, a gaseous product mixture containing materials which are otherwise deposited on the ductwork as tacky solids at said first temperature, comprising the step of introducing a barrier fluid at a second temperature, lower than the first temperature, along the internal surface of the ductwork to form a fluid barrier.
2. (Original) A method according to Claim 1, wherein the materials otherwise deposited as tacky solids include volatile metal chlorides.
3. (Original) A method according to Claim 2, wherein the volatile metal chlorides contain one or more chlorides selected from the group consisting of chlorides of Fe, Mn, Ni, Si, Al, Nb, Zr, V, Mg, and Ca.
4. (Original) A method according to Claim 1, wherein the chlorides include solid chlorides.
5. (Original) A method according to Claim 1, wherein the barrier fluid is a liquid at the second temperature.
6. (Original) A method according to Claim 1, wherein the barrier fluid is comprised of a material already present in the gaseous mixture.
7. (Original) A method for reducing chloride buildup on the internal surface of ductwork conveying, at a first temperature, a gaseous mixture containing such chlorides, comprising the step of introducing a barrier fluid at a second temperature, lower than the first temperature, along the internal surfaces of the ductwork to form a fluid barrier, wherein the barrier fluid is a liquid at the second temperature.
8. (Original) A method according to Claim 7, wherein the barrier fluid and second temperature are chosen so that the barrier fluid is vaporized in the ductwork.

9. (Original) A method according to Claim 7, wherein the barrier fluid is comprised of a material already present in the gaseous mixture.

10. (Original) A method for reducing chloride buildup on the internal surface of ductwork conveying, at a first temperature, a gaseous mixture containing volatile metal chlorides and titanium tetrachloride, comprising the step of introducing a barrier fluid at a second temperature, lower than the first temperature, along the internal surfaces of the ductwork to form a fluid barrier.

11. (Original) A method according to Claim 10, wherein the barrier fluid comprises nitrogen, carbon dioxide, or titanium tetrachloride.

12. (Original) A method according to Claim 10, wherein the barrier fluid is titanium tetrachloride.

13. (Original) A method according to Claim 10, wherein the barrier fluid is a liquid.

14. (Original) A method according to Claim 10, wherein the first temperature is from about 800 °C to about 1400 °C.

15. (Original) A method according to Claim 10, wherein the second temperature is from about 60 °F (15.6 °C) to about 100 °F (37.8 °C).

16. (Original) A method for reducing chloride buildup on the internal surface of ductwork conveying, at a first temperature, a gaseous mixture containing volatile metal chlorides and titanium tetrachloride, comprising the step of spraying liquid titanium tetrachloride at a second temperature, lower than the first temperature, along the internal surface of the ductwork to form a fluid barrier.

17. (Original) A method according to Claim 16, wherein the first temperature is from about 800 °C to about 1400 °C.

18. (Original) A method according to Claim 16, wherein the second temperature is from about 60 °F (15.6 °C) to about 100 °F (37.8 °C).

Claims 19-25 (Canceled)